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(51)国際特許分類: H01L 27/146, 31/10, G01T 1/20 (74)代理人: 長谷川 芳樹, 外(HASEGAWA, Yoshiki et al.); 〒1040061 東京都中央区銀座一丁目10番6号 銀座ファーストビル 創英國際特許法律事務所 Tokyo (JP).

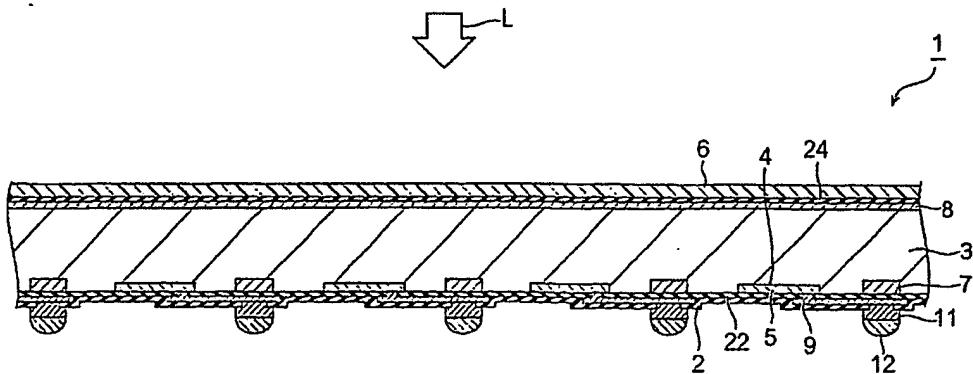
(21)国際出願番号: PCT/JP2004/004212 ✓ (22)国際出願日: 2004年3月25日 (25.03.2004) (25)国際出願の言語: 日本語 (26)国際公開の言語: 日本語 (30)優先権データ: 特願2003-087894 2003年3月27日 (27.03.2003) JP (71)出願人(米国を除く全ての指定国について): 浜松ホトニクス株式会社 (HAMAMATSU PHOTONICS K.K.) [JP/JP]; 〒4358558 静岡県浜松市市野町1126番地の1 Shizuoka (JP). (72)発明者; および (75)発明者/出願人(米国についてのみ): 柴山 勝己 (SHIBAYAMA, Katsumi) [JP/JP]; 〒4358558 静岡県浜松市市野町1126番地の1 浜松ホトニクス株式会社 内 Shizuoka (JP). (81)指定国(表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW. (84)指定国(表示のない限り、全ての種類の広域保護が可能): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

添付公開書類:  
— 國際調査報告書

(総葉有)

(54)Title: PHOTODIODE ARRAY AND PRODUCTION METHOD THEREOF, AND RADIATION DETECTOR

(54)発明の名称: ホトダイオードアレイ及びその製造方法、並びに放射線検出器



(57)Abstract: A photodiode array (1) is provided with an n-type silicon substrate (3). A plurality of photodiodes (4) are formed in an array form on the surface opposite to the surface, onto which a light (L) to be detected enters, of the n-type silicon substrate (3). An area corresponding to a photodiode (4)-formed area on the light-to-be-detected (L)-incident surface of the n-type silicon substrate (3) is at least coated to provide a resin film (6) that transmits the light to be detected (L).

(57)要約: ホトダイオードアレイ 1は、n型シリコン基板 3を備える。n型シリコン基板 3における被検出光Lの入射面の反対面側に、複数のホトダイオード 4がアレイ状に形成されている。n型シリコン基板 3の被検出光Lの入射面側におけるホトダイオード 4が形成された領域に対応する領域を少なくとも被覆し、被検出光Lを透過する樹脂膜 6が設けられている。

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2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004212

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> H01L27/146, H01L31/10, G01T1/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> H01L27/146, H01L31/10, G01T1/20

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2004
Kokai Jitsuyo Shinan Koho	1971-2004	Toroku Jitsuyo Shinan Koho	1994-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2001-291892 A (Hamamatsu Photonics Kabushiki Kaisha), 19 October, 2001 (19.10.01), Full text; all drawings & AU 4458601 A & CN 1422441 A & EP 1280207 A1 & WO 01/75977 A1 & US 2003/34496 A1	1-11
Y	JP 2003-66150 A (Canon Inc.), 05 March, 2003 (05.03.03), Full text; all drawings (Family: none)	1-11

 Further documents are listed in the continuation of Box C. See patent family annex.

"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  
08 June, 2004 (08.06.04)Date of mailing of the international search report  
22 June, 2004 (22.06.04)Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004212

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 01/51950 A1 (Hamamatsu Photonics Kabushiki Kaisha), 19 July, 2001 (19.07.01), Full text; all drawings & AU 2548501 A & EP 1253442 A1 & US 2002/158208 A1	1-11
Y	JP 5-121711 A (NEC Corp.), 18 May, 1993 (18.05.93), Full text; all drawings (Family: none)	2-5, 7-11